



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,065	07/30/2003	Donald VanderSluis	VTE-141-B	8198

7590

06/17/2005

Andrew R. Basile
Young & Basile, P.C.
Suite 624
3001 West Big Beaver Road
Troy, MI 48084

EXAMINER

AGUIRRECHEA, JAYDI A

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,065

Applicant(s)

VANDERSLUIS, DONALD

Examiner

Jaydi A. Aguirrechea

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-25 and 27-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-22, 35-42 and 44 is/are rejected.
- 7) ☐ Claim(s) 1-3, 5-14, 23-25, 27-34 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings were received on 12/27/2004. These drawings are acceptable.

Claim Objections

2. Claim 44 is objected to because of the following informalities: Claim 44 refers to the method of claim 21; however, claim 21 is directed to an apparatus. Appropriate correction is required. To advance prosecution, the Examiner assumes claim 44 to be dependent upon claim 35, which claims a method.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 15-22, 35-42 and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoffmann et al. (US 6236190)

Hoffmann discloses a device and method for driving a capacitive actuator; the device comprising a piezoelectric (smart material) actuator (P); a power source (V) connected to the actuator and a switch circuit (See figures 1-2 and its description) for discharging the actuator in response to the removal of the connection to the power source.

The term “actively” is a relative term that has been given little patentable weight.

With regards to claim 16, Hoffmann discloses a switch circuit for charging the actuator (Figures 1 and 2).

With regards to claims 17 and 18, Hoffmann discloses a switch circuit for charging and discharging the actuator in response to the control signal. See columns 4 and 5.

With regards to claims 19 and 21, Hoffmann discloses a voltage comparator (K).

With regards to claim 20 and 22, Hoffmann discloses the different stages of the charging and discharging process of the piezoelectric actuator in the description of the preferred embodiment (Cols. 4 and 5).

With regards to claims 35-42 and 44, directed to the method of charging and discharging a capacitor actuator, Hoffman anticipates the invention as disclosed above.

Allowable Subject Matter

5. Claims 1-3, 5-14, 23-25, 27-34 and 43 are allowed.
6. The following is a statement of reasons for the indication of allowable subject matter:
 - The references of the Prior Art of Record fail to teach or suggest either alone or in obvious combination the limitations as set forth in claim 1, and specifically comprising the limitation of *a control signal providing a selectable input voltage wherein an output voltage of the DC to DC converter is applied to the smart material actuator and wherein the output voltage is proportional to the input voltage.*

Response to Arguments

7. Applicant's arguments with respect to claims 15 and 35 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2834

Conclusion

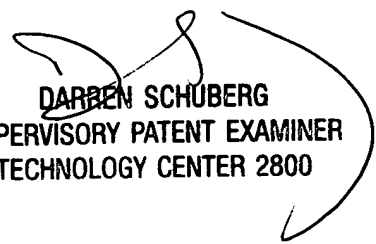
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaydi A. Aguirrechea whose telephone number is 571-272-2018. The examiner can normally be reached on M-Th 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JAA
6/8/2005


DARREN SCHUBERG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

OK to Enter
6/7/05
pa

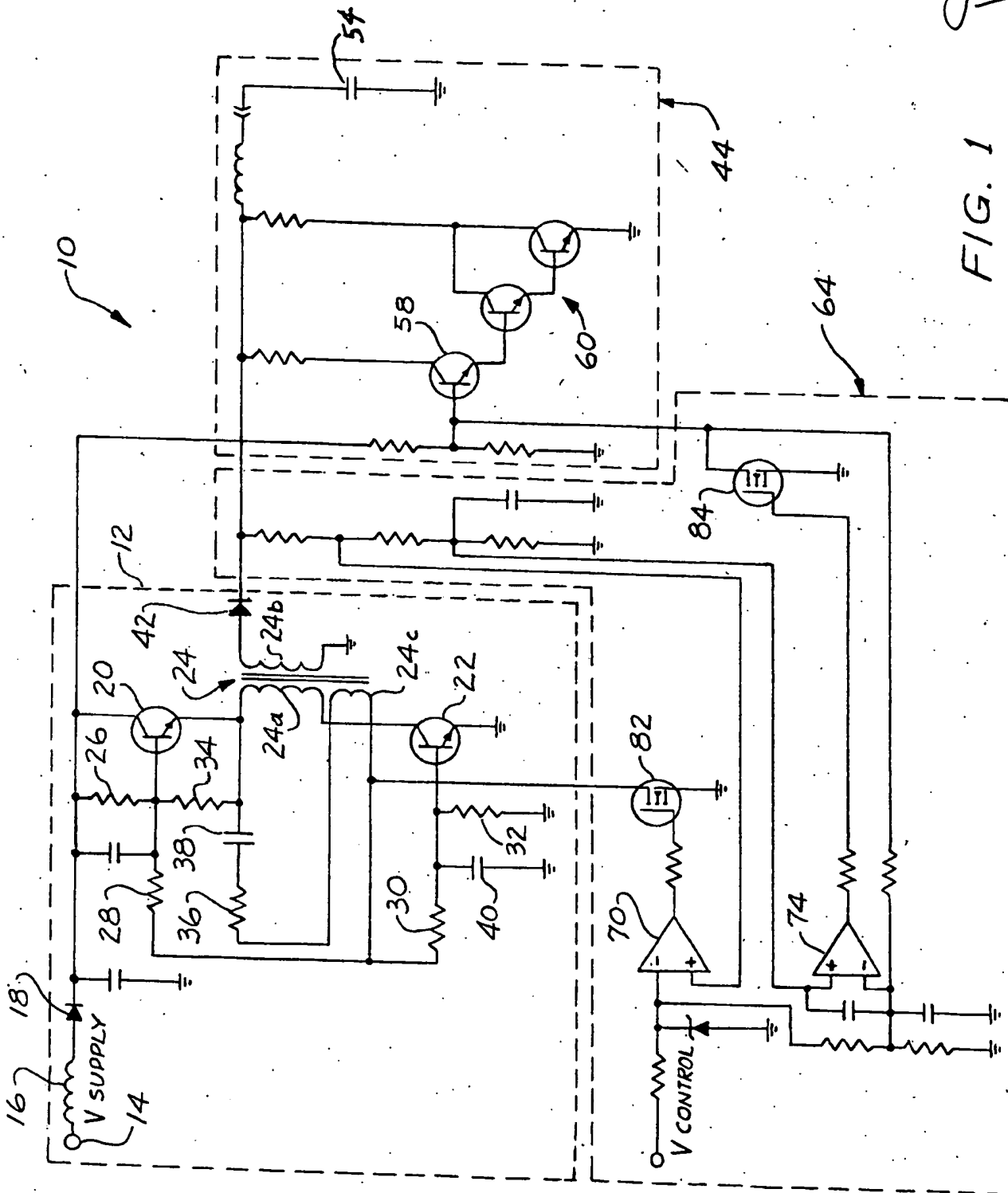


FIG. 1